

Claims

1. An adjustable planar antenna comprising a ground plane, a radiating plane with a dielectric support part, a feed conductor of the antenna, a short conductor between said planes and a switch for changing at least one resonance frequency of the antenna, the planar antenna further comprising a parasitic conductive element, which is attached to said dielectric support part and galvanically connected to a first terminal of said switch, a second terminal of the switch having a coupling to the ground plane.
2. A planar antenna according to claim 1, said parasitic conductive element being a strip conductor.
3. A planar antenna according to claim 2, where the radiating plane is a conductive layer on upper surface of an antenna circuit board, and the dielectric support part is dielectric layer of the antenna circuit board, and said strip conductor is on lower surface of an antenna circuit board.
4. A planar antenna according to claim 3, having at least first and second radiating element which resonates in different operation bands, said strip conductor being in vertical direction by its whole area located by the first radiating element.
5. A planar antenna according to claim 3, having at least first and second radiating element which resonates in different operation bands, a first part of said strip conductor being in vertical direction located by the first radiating element and a second part of said strip conductor being in vertical direction located by the second radiating element.
6. A planar antenna according to claim 5, the second radiating element being a slot radiator.
7. A planar antenna according to claim 2, said dielectric support part being a support frame, which holds the radiating plane at certain distance from the ground plane, and said strip conductor being located on a vertical surface of said support frame.
8. A planar antenna according to claim 7, the radiating element being a separate metal sheet.
9. A planar antenna according to claim 7, the radiating element being a conductive layer on the upper surface of the antenna circuit board.

10. A planar antenna according to claim 1, said coupling of the second terminal of the switch to the ground plane being galvanic.
11. A planar antenna according to claim 1, said coupling of the second terminal of the switch to the ground plane being reactive for setting a displacement of a resonance frequency of the antenna.
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12. A radio device having an adjustable planar antenna, which comprises a ground plane, a radiating plane with a dielectric support part, a feed conductor of the antenna, a short conductor between said planes and a switch for changing at least one resonance frequency of the antenna, the planar antenna further comprising a parasitic conductive element, which is attached to said dielectric support part and galvanically connected to a first terminal of said switch, a second terminal of the switch having a coupling to the ground plane.
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